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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/344,629	06/25/1999	YASUKI RAI	2933SE-83	9273

22442 7590 10/21/2003

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EXAMINER

AWAD, AMR A

ART UNIT PAPER NUMBER

2675

DATE MAILED: 10/21/2003

23

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/344,629

Applicant(s)

RAI et al.

Examiner

Amr Awad

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Aug 4, 2003
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 3-5, 7-12, 16-19, and 22-34 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-5, 7-12, 16-19, and 22-31 is/are allowed.
- 6) ☒ Claim(s) 32-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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## DETAILED ACTION

### *Claim Rejections - 35 U.S.C. § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim recites “a light receiving device which is formed on one of the opposing surfaces of the first and second substrates.” The limitation “the opposing surfaces has no antecedent basis because what it is recited earlier is the first and second substrates opposing each other, and not the opposing surfaces of the substrates. This renders the claim indefinite because it is not clear whether the opposing surfaces are the inside surfaces (the two facing surfaces) of the two substrates, or the outside surfaces, which in both situations can be qualified as opposing surfaces. Since both situations are qualified, and since the specification only shows the device located on the outer side surface of one of the two substrates, then having the device formed on one of the opposing sides (by considering the opposing sides are the inside facing surfaces of the substrates) is enabled. Examiner respectfully requests a correction and clarification. For the purpose of examining the claim on the merit, the Examiner will assume that the opposing surfaces are the outside surfaces of the two substrates.

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***Claim Rejections - 35 U.S.C. § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant

Admitted Prior Art (figures 1-2 and its related text; hereinafter referred to as APA) in view of Helms (US patent NO. 5,952,992).

As to claim 32, APA (figure 2) teaches a liquid crystal display that includes a liquid crystal display panel (100) having a predetermined display characteristic (APA referred to the predetermined display characteristic as predetermined brightness; see top of page 2), a luminescent unit located adjacent to the liquid crystal display panel, wherein the luminescent unit includes a light receiving device (115) which collects ambient light and located on one of outside surfaces (one of the opposing surfaces of the first and second substrates (101 and 104), and a light source (114); see specification, pages 1-2 (as can be seen in figure 2 of the APA, the LCD 100 which is represented in fig. 1 is formed above the light receiving device 115). APA teaches that the collected ambient light is used as a backlight of the liquid crystal display; see page 3, second paragraph. APA also teaches that the ambient light is collected in the rear of the liquid crystal display (page 3, lines 5-9 of applicant's specification).

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APA does not teach a control circuit electrically connected to the liquid crystal display panel, wherein the control circuit varies the predetermined display characteristic in accordance with the amount of collected ambient light.

However, Helms teaches a method and apparatus for automatically adjusting the brightness level of an LCD based on the ambient lighting conditions (abstract). Helms (figure 2) teaches a brightness control circuitry (204) wherein a microprocessor (204a) is electrically connected to backlight driver circuitry for generating brightness control signals ; see column 3, lines 19-34. Helms (figure 3) teaches that the ambient light signal is used to index the automatic brightness level signal look up table to change the brightness level ( predetermined display characteristic); see column 4, lines 1-32.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include Helms's teaching of having a control unit to change the brightness level (predetermined display characteristic) according to the ambient light to be incorporated to APA's device so as motivated by Helms, to have an intelligent LCD brightness control system which automatically adjusts to the ambient lighting conditions of the environment in which the PC is being used; see column 2, lines 3-6. Furthermore, the brightness level adjustment automatically, without user intervention, thereby reducing the possibility of user error; see column 2, lines 42-46.

The two references are combinable because, APA teaches the idea of collecting the ambient light which can be used as a backlight. Helms would be incorporated to APA to control

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the brightness of the LCD according to the detected ambient light. In an alternative way, Helms teaches having a control system that receives the ambient light and controls the brightness of the LCD according to the received ambient light. APA further enhance Helms by not only sensing the ambient light, but also collecting it to be used in the backlight.

5. Claims 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA and Helms as applied to claim 32 above, and further in view of Kubo (US patent NO. 6,195,140).

As can be seen above, APA and Helms teach all the limitations of claims 33-34 except the citation of having a liquid crystal thin film transistors on one of the substrates.

However, However, Kubo teaches a liquid crystal display device that includes transmission and reflection regions (abstract). Kubo teaches varying the applied voltage to the liquid crystal display in accordance to the transmitted light of ambient light; see column 12, lines 29-36. Kubo also teaches that the transmittance of the display varies in accordance to the detected ambient light; see column 15, lines 39-47, and wherein the liquid crystal display is made of thin film transistors (see figure 2).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Kubo having a thin film transistors in the liquid crystal display to be incorporated into APA's modified device so as to provide a sharp images which are known in case of using thin film transistors.

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*Allowable Subject Matter*

6. Claims 3-5, 7-12, 16-19 and 22-31 are allowed.

*Response to Arguments*

7. Applicant's arguments filed August 04, 2003 have been fully considered but they are not persuasive.

Applicant (middle of page 22) argued that since it is recited earlier in claim 32 that the first and second substrate oppose each other, then the term "the opposing surfaces" has proper antecedent basis, and therefore, the rejection under U.S.C. 112 has been overcome. Examiner respectfully disagrees. As indicated in the rejection under 35 U.S.C. 112 above, the claim as amended is indefinite because the term "the opposing surfaces" lacks antecedent basis.

Furthermore, it is clear that the first and second substrates are opposing each other, but it is not clear which surfaces are the opposing surfaces because each one of the first and second substrates has two surfaces. Therefore, the opposing surface may be the two surfaces facing each other or the two surfaces away from each other. For these reasons, the claim as amended is indefinite.

Applicant (last paragraph of page 22) argued that the element 115 is a light collector and not a light receiving device. Examiner respectfully disagrees. It is clear that if a device is collecting light, then it is fair to say that the device is receiving the light, because it is not possible to collect the light without receiving it. Therefore, the examiner believes that the light collector (115) fairly reads on the limitation "light receiving device" as claimed.

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Applicant (bottom of page 22) argued that the light collector 115 is not formed on one of the opposing surfaces of the first and second substrates 101 and 104 because the light collector 115 is optically connected to an end of a light guide plates. Examiner respectfully disagrees. It is clear from figure 2 of the APA that the light collector (115) is formed on the LCD on the outer surface of the (100) which fairly reads on the claimed limitation. Applicant also argued that Helms does not disclose a light receiving device . However, it is clear from the rejection above that such limitation is taught by APA.

### *Conclusion*

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.



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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amr Awad whose telephone number is (703) 308-8485.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras, can be reached on (703) 305-9720.

10. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 872-9314 (for Technology Center 2600 only)

*Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA., Sixth Floor (Receptionist).*

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to Technology center 2600 Customer Service Office whose telephone number is (703) 306-0377.



A.A

October 15, 2003.